

А. А. Ананов, А. А.

Effect of phosphate nutrition of tomatoes on the quality of the seed.
A. A. Ananov and O. N. Popova (*Agrobiologiya*, 1954, No. 5, 110—
111). Application of small amounts of P fertiliser (5 g. per 2 sq. m.
of frame) improved seed quality. Seed from treated plants produced
larger plants, earlier yields and fruit having higher sugar and
vitamin C and lower acid contents. Hort. Abstr. (A. G. P.).

✓ The effect of potassium on the course of enzyme conversion of sucrose and the dynamics of sugar in plants. A. A. Anisimov. *Uchenye Zapiski Gor'kovsk. Univ.* 1954, No. 29, 29-31. Referat. *Zhur. Khim., Biol. Khim.* 1955, No. 3200. — Beans, oats, sugar beets, and tomatoes were fertilized with K_2SO_4 which was introduced directly into the soil, used as a spray of 0.03% soln. of the salt, or infiltrated into the leaves as 0.05% soln. Enzymic sucrose changes (I) in the leaves were studied by the vacuum-infiltration method of A. L. Kursanov. In the early stages of the plants' development K activates the synthesizing enzymic activity of the leaves, while in the 2nd stage the breakdown processes of I predominate. The demarkation between synthesis and breakdown in oats and sugar beet coincides with 30-40 days and in beans with the end of the 2nd month of growth. Treatment with K_2SO_4 lowers the content of monosaccharides in the leaves of sugar beets, beans, and tomatoes.
B. S. Levine

Anisimov, A.A.

✓ The effect of ammonium sulfate on the course of enzymic
sucrose conversion and on the dynamics of sugars. A. A.
Anisimov. *Uchenye Zapiski Gorkovsk. Univ.* 1984, No. 25/MD
85-76; Referat. Zhur. Khim., Biol. Khim. 1985, No. 3304.
(NH₄)₂SO₄ as fertilizer for oats, beans, sugar beets, and to-
matoes changes the course of sucrose enzyme conversion
of the leaves into the direction of synthesis. The sucrose
and monose content of the leaves is lowered. Under in-
tensified N fertilization of oats the enhanced sucrose syn-
thesis persisted in the leaves of the plants of succeeding
generations. B. S. Levine.

ANISIMOV, A. A.

✓ Carbohydrate-protein metabolism and crop yield in radical assimilation of soil carbon dioxide. A. A. Anisimov and

R. K. Petrova (State Univ., Gorki). *Russk. Razved.* 2 558-64 (1965).—Introduction into the soil of K, NH₄, and Ca carbonates reduces the moisture content and that of sucrose in leaves of plants (beets, cabbage, cucumbers) but increases the sugar content of the seeds, fruit, and tubers, as well as of polysaccharides in the leaves. These extra sources of soil CO₂ also aid the accumulation of total and protein N. K and NH₄ carbonates improve crop yields by 10-15%. The use of CaCO₃ in liming of acid soils also gave a similar effect in comparison with Ca(OH)₂. O. M. K.

Intensity of photosynthesis after administration into the
cell of potassium bicarbonate as an added source of soil salt
potassium (N. V. Kozlov, A. A. Anisimov, and L. B.
Radchenko, N. V. Lobachevskii Univ., Odessa, *Russ. J. Soil Sci.* 1954-6 (1956) introduction of 80-120 kg
K₂CO₃/ha to soil in which potatoes, cucumbers, or beans
were grown resulted in increased assimilation of CO₂ from
the air by the leaves, increased content of chlorophyll, and
increased rate of respiration. One possible cause may be
the accelerated synthesis of amino acids in the root system,
which requires large amounts of consumable carbohydrates.
G. M. Kozlov

ANISIMOV, A.A.

Translocation of assimilates in wheat seedlings in connection
with the conditions of root nutrition. Fiziol.rast. 6 no.2:
138-143 Mr-Apr '59. (MIRA 12:5)

1. N.I.Lobachevskiy Gorkiy State University, Gorkiy.
(Plants, Motion of fluids in)
(Wheat)

ANISIMOV, A.A.; DUBOVSKAYA, I.S.; DOBRYAKOVA, L.A.

Effect of nitrogen and phosphorus nutrition of wheat on the
incorporation of C^{14} into assimilates and their translocation.
Fiziol. rast. 11 no.5:793-799 S-O '64. (MIRA 17:10)

1. Gorky State University.

ANISIMOV, A.A.

Assimilate translocation in wheat during the phase of earing as related to the conditions of nitrogen and phosphorus nutrition.
Dokl. AN SSSR 139 no.3:742-743 J1 '61. (MIRA 14:7)

1. Gor'kovskiy gosudarstvennyy universitet im. N.I. Lobachevskogo.
Predstavleno akademikom A.L. Kursanovym.
(Wheat) (Plants, Motion of fluids in)
(Plants--Nutrition)

ANISIMOV, A.A.; KUZNETSOVA, L.A.; DUBOVSKAYA, I.S.; LIKHOVIDOVA, Ye.V.

Flow of assimilates during the infiltration of osmotically active
substances into leaves. Fiziol. rast. 9 no.1:16-20 '62.
(MIRA 15:3)

1. Gorky State University.

(Plants, Motion of fluids in) (Leaves)

ANISIMOV, A.A.; FUZINA, Ye.K.; DOBRYAKOVA, L.A.; LIKHOVIDOVA, Ye.V.

Diurnal periodicity of the translocation of assimilates. Dokl.
AN SSSR 146 no.6:1441-1444 0 '62. (MIRA 15:10)

1. Gor'kovskiy gosudarstvennyy universitet im. N.I. Lobachevskogo.
Predstavleno akademikom A.L. Kursanovym.
(Plants—Assimilation)

ANISIMOV, A.A.

Products of assimilation of $C^{14}O_2$ by wheat leaves. Trudy po khim. i
khim. tekhn. no. 1: 182-185 '63. (MIRA 17:12)

ANISIMOV, A.A.

Effect of superphosphate on the translocation of assimilates
in the potato plant. Fiziol. rast. 11 no.1:64-70 Ja-F '64.
(MIRA 17:2)

1. Gor'kovskiy universitet imeni Lobachevskogo.

ANISIMOV, A.A.

Effect of ammonium sulfate on the movement of assimilates in sugar
beets. Fiziol. rast. 12 no.2:280-284, Mar-Apr '65. (MIRA 18:6)

1. Gor'kovskiy gosudarstvennyy universitet imeni Lobachevskogo.

ANISIMOV, A.A.; BOYKOV, P.Va.; VOLKOVA, A.B.

Effect of salts on the activity of α -glucan phosphorylase.
Prikl. biokhim. i mikrobiol. 1 no.2:206-211 Mr. 1p. 103.
(MIRA 18:11)
1. Gor'kovskiy gosudarstvennyy universitet imeni N.I.
Lobachevskogo.

L 14542-66 EWT(1)/EWT(m)/EWI(t)/EWP(k)/EWP(b) JD/HW

ACC NR: AT6003159

SOURCE CODE: UR/2529/64/000/084/0143/0148

AUTHORS: Anisimov, A. A.; Lysov, M. I. (Professor)

ORG: Kazan Aviation Institute (Kazanskiy aviatsionnyy institut)

TITLE: Shaping curvilinear parts from tubes by the bending-rolling method

SOURCE: Kazan, Aviatsionnyy institut. Trudy, no. 84, 1964. Aviatsionnaya tekhnologiya i organizatsiya proizvodstva (Aviation technology and production management), 143-148

TOPIC TAGS: metal bending, bending machine, metal tube, pipe, metalworking

ABSTRACT: This paper deals with the possibility of shaping parts from tubes by the bending-rolling method. The following problems are involved: the development of apparatus and an experimental check; determination of the adjustment parameters that ensure the formation of a part of a given shape; distortions of the cross section of tubes in plastic bending as functions of the grade of the material, of the tube cross section, of the bending radius, and of the filler used; and springing in plastic bending of parts from tubes as a function of the grade of the material, of the tube cross section, and of the bending radius. The proposed scheme uses three rollers. An analytic relationship between the curvature and the adjustment parameters is derived

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ACC NR: AT6003159

$$1/\rho = \frac{2(d_p + d_{mp} - y \cos \beta)}{y^2 - y(d_p + d_{mp}) \cos \beta}$$

The method makes it possible to mechanize and automate the process of shaping parts from tubes and to increase the efficiency of the process and the accuracy of the parts. Orig. art. has: 1 formula, 2 diagrams, and 2 graphs.

SUB CODE: 13/ SUBM DATE: 10Oct63/ ORIG REF: 002

Cord 2/2

ANISIMOV, A.A.

Diurnal periodicity of the composition of labeled assimilates in connection with their movement in plants. Fiziol. rast. 12 no.5: 935-938 S-O '65. (MIRA 19:1)

1. Gor'kovskiy gosudarstvennyy universitet imeni Lobachevskogo.

L 00603-66 ENT(1)/ENT(m)/ENP(t)/ENP(k)/ENP(b)/ENA(c) JD/HM

ACCESSION NR: AR5018955

UR/0276/65/000/007/V031/V031

621.981.23

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya. Svodnyy tom, Abs. 7V231

AUTHOR: Anisimov, A. A., Lysov, M.I.

TITLE: Roll extrusion bending as a process for embossing curved sections from pipes

CITED SOURCE: Tr. Kazansk. aviats. in-ta, vyp. 84, 1964, 143-148

TOPIC TAGS: automatic roll extrusion, pipe bending, curved section embossing, extrusion roll bender, set up parameter, punched tape program

TRANSLATION: The report presents results of a study concerning the feasibility of manufacturing sections from pipes by roll extrusion bending. The authors evolved a tester design, verified experimentally the method discussed and the stability of the shape of the part produced at a constant set up of the machine, defined set-up parameters insuring production of specified shape parts, and analyzed distortion in the configuration of a pipe cross section, as well as the spring back during plastic deformation, in relation to brand of material, pipe cross section, bend radius, and the type of actuator. The feed mechanism in the tester design described forces the pipe through a group of three rollers. Formulas and diagrams are included to

L. 00603-66

ACCESSION NR: AR5018955

relate set-up parameters to the pipe curvature. Automatic control of the unit is programmed on punched tape. Dimensional stability of the parts produced was satisfactory. Bibl. with 2 titles, 4 illustrations. S. Kolesnikov

SUB CODE: IE

ENCL: 00

Card 2/2

RAZUMEYEV, V.F., kand.tekhn.nauk, dotsent; PROTASOV, V.D., inzh.; ANISIMOV,
A.D., inzh.

Strength characteristics of circular pipes made of pertinax. Izv.
vys. ucheb. zav.; mashinostr. no. 3:40-45 '61. (MIRA 14:5)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni Baumana.
(Pipe, Plastic)

ANISIMOV, A.F.

92-58-3-15/32

AUTHORS: Anisimov, A.F., Engineer and Samarskiy, A.G., Engineer

TITLE: Continuous Control of Neutralization of Crude Stock
in Atmospheric-Vacuum Pipe Stills (Neprexyvnyy kontrol'
rezhima podshchelachivaniya syr'ya na ustanovkakh AVT)

PERIODICAL: Neftyanik, 1958, Nr 3, pp 15-16 (USSR)

ABSTRACT: To protect the equipment against corrosion the crude stock processed in an atmospheric vacuum pipe still has to be neutralized. The neutralization of crude stock is ordinarily controlled by a laboratory test of the water settled from the wide-fraction in the surge tank. The lack of continuous control over the alkalinity of the water shortens the service life of the processing equipment. Therefore, the special construction bureau for the introduction of automation in refineries has studied this problem at the atmospheric-vacuum pipe still of the new Ufa Refinery and ascertained that the

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Continuous Control of Neutralization (Cont.)

92-58-3-15/32

pH value of the condensation water settling in the tank of the evaporator is almost always 10, while the pH of water drained off from the surge tank of the atmospheric tower depends on the concentration of the reagent (Fig. 1). As a result of this study, it has been proposed that the pH value be determined in the stream before the stream enters the surge tank. Therefore, samples of the product mixed with the settled water were taken at the lowest point of the stream line section between the condenser-cooler of the atmospheric tower and the surge tank (Fig. 2). The mixture was directed through a 1/2-in. tube to a small settler, where the separation of water from the mixture took place. The settled water was filtered and its pH determined. In the course of this operation, it has been found that the present system of calomel electrodes is inadequate for determining the pH value in a polluted mixture containing petroleum products. Therefore, the calomel electrode design was

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Continuous Control of Neutralization (Cont.)

92-58-3-15/32

modified (Fig. 3). As a result, the redesigned electrode can now be used during a much longer period of time, and can be easily dismantled and reassembled. On the whole, the equipment operates satisfactorily and this fact was confirmed in 1957 by the new Ufa Refinery. There is one diagram showing alkali consumption, one drawing showing the continuous determination and recording of the pH value, and one sketch of the redesigned calomel electrode.

ASSOCIATION:Ufimskoye otdeleniye konstruktorskogo byuro po
avtomatizatsii (Ufa Section of the Design Bureau
for Automation)

AVAILABLE: Library of Congress

Card 3/3

S/065/60/000/006/005/008/XX
E194/E484

AUTHORS: Anisimov, A.F., Samarskiy, A.G. and Alekseyev, Yu.A.

TITLE: An Automatic Catalyst Circulation System on a
Catalytic Cracking Plant ||

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, No.6.
pp.1-6

TEXT: The catalyst measuring and circulating system is a most important part of a catalytic cracker. The main object of the circulating system is to maintain a constant rate of catalyst circulation and the necessary level in the bunkers. At present, in almost all of the plants this operation is manually controlled and is very laborious. Accordingly tests were made with the object of making the catalyst pneumatic transport system automatic on a catalytic cracker at the Novo-Ufimskiy Refinery. Regenerated catalyst is delivered to the measuring device from which secondary air delivers it to an air lift where it is lifted by primary air to a cyclone separator. After separation of air and fines the catalyst is delivered to the reactor bunker. After use in the reactor, the catalyst is again passed to a pneumatic measuring device from which it is transported to a cyclone


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S/065/60/000/006/005/008/XX
E194/E484

An Automatic Catalyst Circulation System on a Catalytic Cracking Plant

separator and thence passes to the regenerator. The air lift is illustrated schematically in Fig.1 and its operation is described. To maintain normal conditions of catalyst transport in the air lift it is necessary to maintain a certain concentration of catalyst and a strictly suitable flow of primary air. For a constant rate of catalyst delivery, the deliveries of primary and secondary air should be constant. In practice, even though these air supplies are maintained constant, the pressure in the pneumatic measuring device varies for reasons which are explained. It is shown that the constant pressure or concentration in the air lift must be maintained by adjusting the quantity of secondary air, whilst the quantity of circulating catalyst must be adjusted by altering the delivery of primary air. A diagram of the control system that was developed is shown in Fig.2. The operating principles are explained. Pressures in the measuring devices are adjusted by altering the rate of delivery of secondary air and corrected according to the flow of catalyst through the reactor or to the level of catalyst in the reactor bunker. The methods of

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S/065/60/000/006/005/008/XX
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stabilizing the flow of catalyst in the system and of maintaining the correct level in the bunkers are explained. Analysis of the circuit shows that if there is any variation in the pressure in the measuring devices or deviation of the flow of catalyst through the reactor or of the level of catalyst in the reactor bunker from given values the control circuit automatically corrects the deviation because all the parameters are interrelated in a single integrated control system. Tests were made to establish permissible limits of variations of catalyst flow through the regenerator and it was found that under certain experimental conditions variations of 6 to 8% did not cause appreciable temperature variation and that the level in the reactor bunker could be maintained. The automatic control circuit was largely made up of standard equipment which is described in considerable detail. This system of automatic circulation of catalyst in catalytic crackers has been introduced at the Salavatskiy Petro-Chemicals Plant and the Novo-Ufimskiy Refinery and has given good results. The automatic control system practically prevents carry-over of catalyst and permits more

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S/065/60/000/006/005/008/XX
E194/E484

An Automatic Catalyst Circulation System on a Catalytic Cracking Plant

intensive circulation of catalyst thus improving the operation of the installation. The use of manual labour in controlling circulation is completely avoided. Once the system has been adjusted and appropriate levels have been set for the catalyst in the reactor bunker and for the flow of catalyst through the reactor, further control by the operator is effected only by altering the catalyst flow controller. During two months continuous operation of the system, the operator, when altering the regulator of the rate of catalyst flow, never had to alter the adjustment of the catalyst level in the bunker. Four operators became redundant, the consumption of catalyst was reduced, the quality of the product was improved. Approximate calculations of the Salavatskiy Petrochemicals Plant show that the economy due to introduction of the system is about 2 million roubles. There are 2 figures.

ASSOCIATION: SKB ANN

Card 4/4

ANISIMOV, A. G.
USSR/ Scientists - Radio

Card 1/1 Pub. 89 - 6/27

Authors : Anisimov, A.

Title : Vladimir Ivanovich Sifarov

Periodical : Radio 2, 13-14, Feb 1954

Abstract : A short biographical sketch of V. I. Sifarov, a Soviet scientist, is presented. Some of his works are mentioned as follows: Investigation of radio-detection; investigation of various types of amplifiers; a theory on the stability of tuning amplifiers; work on radio-interferences; intermediate frequencies, and many others. Last autumn, i.e., 1953, he was elected a member correspondent of the Acad. of Sci. of the USSR. Illustration.

Institution:

Submitted:

ANISIMOV, A.G.

AUTHOR Anisimov, A.G., Regular Member of the Society. 108-8-6/10
 TITLE Some Problems of Resonance Amplification.
 (Nekotoryye voprosy rezonansnogo usileniya -Russian)
 PERIODICAL Radiotekhnika, 1957, Vol 12, Nr 8, pp 54-58 (U.S.S.R.)
 ABSTRACT The attempt is made to give some data on the ratio $\frac{S''}{S}$ since there are now data available in publications. S'' denotes the second derivative of the slope of the valve characteristic S . First the basic relations are found by means of the approximation of the valve characteristic suggested by N.N. Krylov. Next, considerations for the choice of the method of operation of the valves and for the arrangement from the point of view of a weakening of the nonlinear effects. It is demonstrated that 1) if in the case of $E_c=0$ $E_{v\text{ optimum}} = -1$ V is secured the real selectivity of the receiver is improved. 2) Comparison of the valves as to the parameter $2q^2$ makes it possible to choose a valve which guarantees little intensity of the nonlinear effects $q = \frac{S_0}{I_0}$, where S_0 denotes the slope and I_0 the anode current of the shifting at the valve grid in the case of zero voltage. 3) Various valves of the same type have various parameters I_0 and S_0 compared to the cross section. 4) In the case of low anode voltage and screen voltage valve properties as to the nonlinear effects deteriorate, i.e. in connection with the much more rapid decline of the amperage in comparison with that of the slope. 5) It can be seen from the obtained tables that in the case of a decrease of voltage at the screened grid nonline-

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ANISIMOV, Anatoliy Georgiyevich; GNUTIKOV , P.I., podpolkovnik, red.;;
MEDNIKOVA, A.N., tekhn.red.

[Cross interference during the reception of radiotelephone signals]
Perekrestnye pomekhi pri prieme radiotelefonnykh signalov. Moskva,
Voen.izd-vo M-va oborony SSSR, 1958. 68 p. (MIRA 11:4)
(Radiotelephone--Interference)

ANISIMOV, A.G.

Pure wool made from waste products. Tekst. prom. 18 no.9:70
S '58. (MIRA 11:10)

16.6500

28198

S/044/62/000/005/039/072
C111/C444

AUTHOR: Anisimov, A. G.

TITLE: A numeric-graphical method for the solution of boundary value problems for ordinary differential equations of second order

PERIODICAL: Referativnyy zhurnal, Matematika, no. 5, 1962, 33-34, abstract 5V164. (Visnyk Kiyvs'k. un-tu, 1959, no. 2, ser. astron., matem. ta mekhan., vyp. I, 131-145)

TEXT: The author proposes a numerical method for the solution of the boundary value problem

$$L[y] = y'' + p(x)y = f(x) \quad (1)$$

$$y(x_0) = y_0, y(x_n) = y_n \quad (2)$$

he estimates the error and proves the convergency of the approximative solution to the exact one. This method essentially consists in the following facts: one starts from the point x_0 , uses only the left boundary condition $y(x_0) = y_0$ and calculates by aid of the recurrence formulas

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$$\xi_{i+1} = x_i - D_i(12 + h^2 \varphi_{i+1}), \quad \eta_{i+1} = \eta_i - D_i(F_i - \phi_i \eta_i)h \quad (3)$$

where

$$D_i = \frac{x_i - \xi_i}{(12+h^2 \varphi_{i-1} - h \phi_i (x_i - \xi_i))},$$

$$\phi_i = \varphi_{i-1} + 10\eta_i + \eta_{i+1}, \quad F_i = f_{i-1} + 10f_i + f_{i+1}$$

one after the other the coordinates ξ_i, η_i ($i=1,2,\dots,n$) of the auxiliary points S_i ($i=1,\dots,n$) which lie on the secants of the approximative integral curve of (1), (2). One supposes that S_0 is identical with the point $K_0(x_0, y_0)$, and according to (3) one obtains that $S_1(\xi_1, \eta_1)$ also coincides with the point K_0 . One uses the right boundary condition $y(\lambda_n) = y_n$ in the inverted order and determines the unknown coordinates y_i of the searched solution of (1), (2) as points of intersection of the

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secant $K_i S_i$ with the straight line $x=x_{i-1}$ ($i = n, n-1, \dots, 2$):

$$\begin{cases} y = y_i + \frac{y_i - y_{i-1}}{x_i - x_{i-1}} (x_i - x) \\ x = x_{i-1} \end{cases} \quad (i=n, n-1, \dots, 2)$$

In order to obtain the formulas (3), one approximates the original equation (1) by the difference equation

$$\frac{1}{h^2} (y_{i-1} - 2y_i + y_{i+1}) = - \frac{1}{12} (\varphi_{i-1} y_{i-1} + 10 \varphi_i y_i + \varphi_{i+1} y_{i+1}) + \frac{1}{12} F_i - R_6,$$

where

$$R_6 = \frac{h^4}{240} y^4(\theta_i), \quad x_{i-1} \leq \theta_i \leq x_{i+1}.$$

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But if (1) is approximated by the difference equation

$$\frac{1}{h^2} (y_{i-1} - 2y_i + y_{i+1}) + \varphi_i y_i - f_i = \frac{h^2}{12} y^{(IV)}(\theta_i), \quad x_{i-1} \leq \theta_i \leq x_{i+1},$$

then one obtains instead of (3) for the determination of the auxiliary points (ξ_i, η_i) the recurrence formulas

$$\xi_{i+1} = x_i - D_i, \quad \eta_{i+1} = \eta_i - D_i(f_i - \varphi_i \eta_i)h,$$

$$D_i = \frac{x_i - \xi_i}{1 - h(x_i - \xi_i)\varphi_i}.$$

The boundary value problem

$$L[y] = y'' + \varphi(x)y = f(x) \quad (4)$$

$$y(x_0) = y_0, \quad y'(x_n) = y'_n, \quad (5)$$

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as well as the Cauchy problem for (1) can be solved analogously. For the problem (4), (5) one obtains for the determination of the auxiliary points $T_i (\xi_i^*, \eta_i^*)$ which lie on the tangent to the searched integral curve in the point $K_i(x_i, y_i)$, the following recurrence formulas

$$\xi_i^* = x_i - D_i^* (12 + h^2 \eta_{i+1}^*), \quad \eta_i^* = \eta_i - \frac{1}{2} D_i^* (F_i - \phi_i \eta_i) h,$$

$$D_i^* = \frac{2(x_i - \xi_i^*)}{24 + h^2 (\eta_{i-1}^* + \eta_{i+1}^*) - h \phi_i (x_i - \xi_i^*)}$$

The author estimates the error of the solution obtained by this method and proves that the numerical solution $y(x_i)$ converges to the exact solution $Y(x_i)$ of the boundary value problem (1), (2), where $Y_i - y_i = O(h^4)$ ($i = 1, 2, \dots, n-1$) holds for $0 \leq -h^2 \varphi(x) \leq 12$. The author compares the proposed numerical method with the Runge-Kutta method which as well shows an error $O(h^4)$, and he shows that the proposed method requires twice less time and labour. In the Runge-Kutta method one has Card 5/6

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to carry out: $17(n-1)$ additions, $4(n-1)+1$ subtractions, $26(n-1)$ multiplications, $2n$ divisions, $2n+1$ substitutions in $f(x)$, and $2n+1$ substitutions in $q(x)$, in order to get the solution of the problem (1), (2). In the proposed method one has to carry out: $7n-5$ additions, $7(n-1)$ subtractions, $9(n-1)$ multiplications, $2(n-1)$ divisions, $n-1$ substitutions in $f(x)$ and $n+1$ substitutions in $q(x)$. The method is illustrated by an example. ✓

[Abstracter's note: Complete translation.]

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16(1), 16(2)

AUTHOR: Anisimov, A.G.

05218
SOV/140-59-5-4/25

TITLE: Numerical - Graphical Method for the Solution of Boundary Value Problems for Ordinary Differential Equations of Second Order

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1959, Nr 5, pp 40-47 (USSR)

ABSTRACT: For the solution of the boundary value problems

$$(1) \quad \begin{cases} Ly = y'' + \varphi(x)y = f(x) \\ y(x_0) = y_0, y(x_n) = y_n \end{cases}$$

and

$$(4) \quad Ly = f(x), y(x_0) = y_0, y'(x_n) + \beta y(x_n) = r_n \quad (\beta \geq 0)$$

the author proposes a combined numerical - graphical method which originates from the usual system of difference equations, to which (1) can be reduced by quadrature formulas under neglect of the remainder term [Ref 2, 1], for which, however, the calculation of the approximate values of the solution is carried out not directly but by use of a number of auxiliary points

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Numerical - Graphical Method for the Solution of
Boundary Value Problems for Ordinary Differential
Equations of Second Order

05248

SOV/140-59-5-4/25

(secant construction). The author gives some considerations on
the convergence and efficiency of the method as well as on the
limits of errors. An example is calculated.
There is 1 table, 1 figure, and 4 references, 3 of which are
Soviet, and 1 German.

ASSOCIATION: Zaporozhskiy mashinostroitel'nyy institut (Zaporozh'ye Machine
Building . Institute)

SUBMITTED: March 4, 1958

Card 2/2

ANISIMOV, A.G.

Numerical solution of linear boundary problems for ordinary
differential equations of the second order. Soob.AN Gruz.SSR
24 no.4:385-389 Ap 1960. (MIRA 13:7)

1. Zaporozhskiy mashinostroitel'nyy institut. Predstavlyano
chlenom-korrespondentom Akademii Sh.Ye.Mikeladze.
(Differential equations)

ANISIMOV, A. G.

Cand Phys-Math Sci - (diss) "Numerical-graphical method of solving linear boundary problems for differential second-order equations." /Kiev, 1961/ 6 pp; (Ministry of Higher and Secondary Specialist Education Ukrainian SSR, Kiev Order of Lenin State Univ imeni T. G. Shevchenko); 100 copies; price not given; (KL, 5-61 sub, 171)

22768

S/041/61/013/001/007/008
B112/B202

16.3400 16.500

AUTHOR: Anisimov, A. G.

TITLE: Numerical solution of second-order linear differential equations with Sturm's boundary conditions

PERIODICAL: Ukrainskiy matematicheskiy zhurnal, v. 13, no. 1, 1961, 91-95

TEXT: The author studies a recursive algorithm for the solution of the following Sturm boundary problem: $y'' + \varphi(x)y = f(x)$, $y(a) + \alpha y'(a) = p$, $y(b) + \beta y'(b) = q$, ($\beta \leq 0$), where $\varphi(x)$ and $f(x)$ and their first and second derivatives are continuous functions on the interval a, b and where $\varphi(x) \leq 0$. The author subdivides the interval a, b by points $x_i = x_0 + ih$ ($i = 0, 1, \dots, n$; $x_0 = a$, $x_n = b$) and determines the values $y_i = y(x_i)$ in the following way:

$$y_{n-j} = B_n \prod_{i=1}^{j-1} (1 - \varrho_{n-i}) + A_n \tilde{y}_n \prod_{i=1}^{j-1} (1 - \varrho_{n-i}) + \\ + \sum_{i=1}^{j-1} \varrho_{n+i-j} \tilde{y}_{n+i-j} \prod_{s=1}^{i-1} (1 - \varrho_{n+s-j}) \quad (j = 1, 2, \dots, n-1),$$

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S/041/61/013/001/007/008
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Numerical solution of...

$$y(b) = \frac{(b - \xi_n)q - \beta[\eta_n - 0.5h(b - \xi_n)f_n]}{(b - \xi_n)(1 + 0.5h^2q_n) - \beta}$$

where $q_s = h/(x_s - \xi_s)$, $\xi_{i+1} = x_i - D_i$, $D_i = \frac{x_i - \xi_i}{1 - h(x_i - \xi_i)q_i}$,

$$\eta_k = \left[y(a) + \sum_{s=1}^{k-1} \frac{1 - C_s}{\prod_{\lambda=1}^s C_\lambda} \cdot \frac{f_s}{q_s} \right] \cdot \prod_{i=1}^{k-1} C_i, \quad (k = 1, 2, \dots, n), \quad C_s = \frac{1}{1 - h(x_s - \xi_s)q_s},$$

$$A_n = \frac{h(1 + 0.5\beta q_n) - \beta}{(b - \xi_n)(1 + 0.5h^2q_n) - \beta}, \quad B_n = \frac{(b - \xi_n - h)(q + 0.5h\beta f_n)}{(b - \xi_n)(1 + 0.5h^2q_n) - \beta}.$$

The author proves the convergence of this process and gives the following error estimation:

$$|r_{n-1}| \leq |r_n| \prod_{i=1}^{n-1} (1 - q_{n-i}) + \sum_{\lambda=1}^{n-1} |\varepsilon_{n-\lambda}| q_{n-\lambda} \prod_{\mu=1}^{j-\lambda-1} (1 - q_{n-\lambda-\mu}), \quad (j = 1, 2, \dots, n-1).$$

where r_i is the absolute amount of the difference between the exact value Y_i and the approximate value y_i of the solution at the point x_i while

Card 2/3

ANISTMOV, A.M. (n. Vapornzh'ye).

A highly accurate drift method. Izv. vys. ucheb. zav.; mat.
no.4:3-7 '65. (MIRA 18:9)

ANISIMOV, A.I.

Conference on the results of the inspection of shelterbelt
afforestation. Zemledelie 25 no.5:83-87 My '63. (MIRA 16:7)

1. Uchenyy sekretar' otdeleniya lesovodstva i agrolesomelioratsii
Vsesoyuznoy sel'skokhozyaystvennoy akademii imeni Lenina.
(Windbreaks, shelterbelts, etc.)

84437

S/057/60/030/009/001/021
B019/B054

26.2311
24.2120 (1502)

AUTHORS: Anisimov, A. I., Vinogradov, N. I., Golant, V. Ye., and
Konstantinov, B. P.

TITLE: A Method of Investigating the Spatial Electron Distribution
in a Plasma γ

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol. 30, No. 9,
pp. 1009-1018

TEXT: This report was delivered at the 4th International Conference on
Ionization Effects in Gases held at Uppsala, Sweden, in August, 1959.

The authors wanted to work out a method permitting a detailed study of
electron distribution in a plasma. To determine the reflecting boundaries
of a plasma, they suggested investigating the phase position of reflected
electromagnetic waves of different frequencies. An exact expression (8)
is given for the phase shift of reflected waves for the case of a linear
concentration distribution of electrons in a plasma. If

$\frac{\omega}{\omega_0} x_1 > 0.5$, the phase shift can be asymptotically represented by

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A Method of Investigating the Spatial Electron
Distribution in a Plasma

84437
S/051/60/030/009/001/021
B019/B054

$\delta = 4\omega x_1/3c - \pi/2$, where ω is the angular velocity of the waves; x_1 is the coordinate of the layer with critical electron concentration at which the electromagnetic waves cannot pass through the layer since the dielectric constant is negative; and c is the light velocity. Fig. 3 shows a block diagram of the high-frequency measuring instrument used to study the electron concentration distribution in a plasma on the basis of the theory described. The plasma in a spherical chamber is sounded simultaneously with three frequencies of 9375, 15,000, and 36,600 megacycles, and the phase position of the reflected waves is studied with the aid of interference effects and an oscilloscope. Fig. 4 shows oscillograms of signals passing through and reflected by the plasma, as well as such relative to the discharge current. From the study of such oscillograms, the authors obtained the time dependence of the signal phase after the beginning of discharge (Fig. 5), the radial concentration distribution of electrons at different points of time after the beginning of discharge (Fig. 6), and the concentration distribution of electrons at different distances from the chamber center (Fig. 7). The method described permits the study of electron concentration in a plasma in the case where $n_{\max} > n_{cr}$;

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A Method of Investigating the Spatial Electron S/057/60/030/009/001/021
Distribution in a Plasma B019/B054

$\omega < (m/4\pi e^2 n_{\max})^{1/2}$, and where diffraction effects are absent: $c/\omega \ll L$
(n_{\max} , n_{cr} are the maximum and the critical electron concentrations; e
and m are charge and mass of the electron; L is the linear extension of
the plasma). The method suggested can be used to study propagating plasma
and also various forms of active plasma, particularly high-temperature
plasma. There are 7 figures and 5 references: 4 Soviet and 1 Swiss.

ASSOCIATION: Fiziko-tekhnicheskii institut AN SSSR, Leningrad
(Institute of Physics and Technology of the AS USSR.
Leningrad) ✓

SUBMITTED: May 7, 1960

Card 3/3

31300

S/057/62/032/003/007/019
B116/B102

9.9845 (1532)

24.6716

AUTHORS: Anisimov, A. I., and Vinogradov, N. I.

TITLE: Experimental determination of the electron collision frequency in dense plasma

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 3, 1962, 308 - 312

TEXT: The electron-ion collision frequency in decomposing plasma is determined from the attenuation of the high-frequency signal and from the phase shift of the wave passing through the plasma with the aid of the high-frequency interferometer shown in Fig. 2. The plasma was free from high frequency, and was probed by means of directive radiation. In the mixing arm of the double T piece (ET_2 , Fig. 2), the reference signal and the signal which had passed through the plasma interfered, the amplitude of the former being much greater than that of the latter. If there was no plasma in the discharge chamber, a certain phase, φ_0 , of the reference signal was established. If the reference signal was in phase with the signal which had passed through the plasma (phase φ_n), i. e., $\varphi_n - \varphi_0 = 0$, X

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S/057/62/032/003/007/019
B116/B102

Experimental determination of...

the amplitudes of the passing signal were determined from the maxima on the interference curve when a change in its phase of $m\pi$ occurs (m being an integer). The concentration, n_0 , of electrons corresponding to this phase shift was graphically determined. To prevent refraction, the TE_{01} wave emitted from the sector horn was focused by an elliptic metal reflector. The collision frequency was measured about 0.5 - 1 msec after the end of the discharge pulse. The frequency of the signal passing through the plasma was 36,600 Mcps ($\lambda_0 = 8.2$ mm). The oscillograms obtained show that in the pressure range 10^{-2} - $4 \cdot 10^{-1}$ mm Hg the plasma was subject to the same wave damping in hydrogen and in helium. This proves the predominant role of electron-ion collisions. The experiments showed that the frequency of these collisions was approximately proportional to the concentration of charged particles. The proportionality factor A decreased about 1.5-fold as the concentration increased from 10^{12} to 10^{13} cm^{-3} . The collision frequencies were determined from the damping of the 36,600 and 27,000 Mcps high-frequency signals, and were equal in both cases, indicating the absence of refraction. These frequencies ν_{ei} were

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ACCESSION NR: AT4025298

S/0000/63/000/000/0095/0103

AUTHORS: Anisimov, A. I.; Vinogradov, N. I.; Golant, V. Ye.

TITLE: Investigation of spatial distribution of the particles in a decaying plasma

SOURCE: Diagnostika plazmy* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963, 95-103

TOPIC TAGS: plasma atom distribution, plasma density, plasma decay, charged particle distribution, plasma instability

ABSTRACT: Curves showing the spatial distribution of charged particles in a decaying plasma in the concentration range 10^{12} -- 10^{13} cm^{-3} are obtained from previously reported experimental data (Zh. tekhn. fiz. v. 32, 197, 1962). It is shown that the procedure for the determination of the spatial distribution of the charged particles used in this research (Zh. tekhn. fiz. v. 30, 1009, 1960) can

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ACCESSION NR: AT4025298

be greatly improved in the case of a decaying plasma, because the charge-particle distribution remains practically the same at the later stages of the plasma decay. A theoretical procedure for processing the experimental data is derived on the basis of the geometrical-optics approximation, and the resultant curves are confirmed by data on the spatial distribution of the plasma glow, showing that the experimental results are in agreement with the theory of plasma decay. Orig. art. has: 5 figures and 7 formulas.

ASSOCIATION: None .

SUBMITTED: 190ct63

DATE ACQ: 16Apr64

ENCL: 02

SUB CODE: ME

NR REF SOV: 007

OTHER: 002

Card 2/4

ANISIMOV, A.I.; VINOGRADOV, N.I.; GOLANT, V.Ye.

Determining the coefficients of volume removal of electrons
by plasma break-up in oxygen. Zhur. tekhn. fiz. 33 no.9:1141-
1143 S '63. (MIRA 16:11)

1. Fiziko-tekhnicheskii institut imeni A.F. Ioffe AN SSSR,
Leningrad.

ANISIMOV, A.I.; VINOGRADOV, N.I.; GOLANT, V.Ye.

Use of the resonator method in studying the break-up of a plasma
in a magnetic field. Zhur. tekhn. fiz. 33 no.11:1370-1377 N '63.
(MIRA 16:12)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe, Leningrad.

KORABLIN, N.P.; ANISHINOV, A.I.; SLAVOLYUBOV, V.V.

Manifestation of rock pressure during the industrial testing of
a variant system of inclined layers with propellers supports. Vop.
gor. davl. no.21:16-22 '64. (ISSN 18:8)

1. raznoobrazie nauchno-issledovatel'skoy na Voprosy izobreteniya.

ACCESSION NR: AP4009924

S/0057/64/034/001/0089/0092

AUTHOR: Anisimov, A. I.; Budnikov, V. N.; Vinogradov, N. I.; Golant, V. Ye.

TITLE: On the reasons for anomalously rapid decay of a plasma in a magnetic field

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.1, 1964, 89-92

TOPIC TAGS: plasma, plasma decay, plasma decay in magnetic field, anomalous plasma decay, electron temperature, recombination, oblique drift waves, fluto instability

ABSTRACT: Several experiments [Orig.art.cites 6 references] have shown that a weakly ionized plasma in a cylindrical container of small diameter in a longitudinal magnetic field decays more rapidly than can be accounted for by current diffusion theory. In order to determine whether this anomalous behavior may be due to enhanced electron temperature, the decay of helium plasmas in a 0.5 cm diameter glass discharge tube was observed at ambient temperatures of 300 and 500°K. The gas pressure was 0.1 mm Hg, and longitudinal magnetic fields up to 4800 Oe were employed. The plasma decay was followed by observing the shift in the resonant frequency of a cavity resonator enclosing a portion of the discharge tube. The intensity of the light emitted by the decaying plasma was monitored with a photomultiplier in order

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ACC.NR: AP4009924

to observe changes in the recombination rate. Raising the ambient temperature from 300 to 500°K produced a small increase in the plasma decay rate. The radiated light intensity was proportional to the square of the electron density and was independent of the magnetic field. The light intensity was greater by a factor 3 or 4 at 300° than at 500°. From these data and the roughly known temperature dependence of the recombination rate, it is concluded that the electron temperature could not exceed the ambient temperature by more than a factor 2.5. It is accordingly concluded that enhanced electron temperature cannot be responsible for the anomalous decay rate. That the rapid decay might be due to recombination is excluded by the fact that the decay rate increased with increasing ambient temperature, whereas the recombination rate decreased. It is inferred that the anomalously rapid decay of a plasma in a magnetic field is due to the development of instability. The excitation of oblique drift waves, and the development of small-scale flute instability due to rotation of the non-uniform plasma in the magnetic field are mentioned as possibilities. Orig.art.has: 1 formula and 3 figures.

2/3

Card

ACC.NR: AP4009924

ASSOCIATION: Fiziko-tekhnicheskiy institut im.A.F.Ioffe AN SSSR, Leningrad (Physical-Technical Institute, AN SSSR)

SUBMITTED: 18Jul63

DATE ACQ: 10Feb64

ENCL: 00

SUB CODE: PH

NR REF SOV: 009

OTHER: 004

Card 3/3

ANISIMOV, A.I.; BUDNIKOV, V.N.; VINOGRADOV, N.I.; GOLANT, V.Ye.

Causes of an anomalously rapid break-up of a plasma in a magnetic field. Zhur. tekhn. fiz. 39 no.1:89-92 Ja '64. (MIRA 17:1)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR, Leningrad.

PERETOLCHIN, V.A., kand. tekhn. nauk; KOLEDIN, Yu.M., inzh.; BUSHMANOV, V.M.,
inzh. STRABYKIN, N.N., inzh.; DOLGUN, Ya.N., inzh.; ANISIMOV, A.I., inzh.

Efficient design of boring bits for the SVB-2 machines. Gor. zhur. no.6;
75-76 Je '65. (MIRA 18:7)

1. Irkutskiy politekhnicheskii institut.

L 10668-66 EWT(1)/EWT(m)/ETC/EPF(n)-2/ENG(m)/ENP(t)/ENP(b) LJP(c) JD/AT

ACC NR: AP5028317 SOURCE CODE: UR/0057/65/035/011/2028/2033

AUTHOR: ^{44,55} Anisimov, A.I.; ^{44,55} Budnikov, V.N.; ^{44,55} Vinogradov, N.I. 99
90
B

ORG: Physico-technical Institute im.A.F.Ioffe, AN SSSR, Leningrad (Fiziko-
tekhnicheskii Institut AN SSSR)

TITLE: Investigation of the decay of helium plasma in a spherical container ^{44,55}

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 11, 1965, 2028-2033 ²¹

TOPIC TAGS: plasma decay, helium plasma, recombination coefficient, recombination radiation, plasma diffusion, ~~spherical geometry~~ *charged particle, microwave*

ABSTRACT: The authors have investigated the decay of spectroscopically pure helium plasmas at pressures from 0.02 to 0.2 mm Hg and electron concentrations from 10^{11} to 10^{13} cm⁻³ in a 14 cm diameter spherical glass container which had been previously outgassed at 3×10^{-9} mm Hg and which was maintained at a temperature between 300 and 500°K during the measurements. The investigation was undertaken to determine the magnitude and mechanism of volume recombination. The plasmas were produced by discharging a 2μf capacitor charged to 8 kV through a four turn ~30 μH winding about the container. The charged particle density was determined by measuring the phase shift of 9375 and 36 600MHz microwaves traversing the plasma, and the recombination radiation from 3000 to 6000 Å was recorded with a photomultiplier. The logarithm of the charged particle density decreased with time less rapidly than

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L 10668-66

ACC NR: AP5028317

linearly, the nonlinearity being most pronounced at the higher pressures. From this it is concluded that volume recombination contributes significantly to the plasma decay. The volume recombination and ambipolar diffusion effects were separated by analyzing the slope of the decay curve as a function of pressure, electron concentration, and wall temperature in terms of an approximate theory of diffusion and recombination in a spherical plasma. The ratio of the intensity of the recombination radiation to the rate of recombination was found to be independent of the experimental conditions. From this it is concluded that only a single recombination mechanism is significant at the pressures, temperatures, and charged particle concentrations investigated, and from the dependence of recombination rate on electron concentration it is concluded that the effective mechanism is three-body collision between an ion and two electrons. The electron concentration dependence of the recombination rate was weaker than that found by E.Hinnov and I.G.Hirschberg (Phys.Rev., 125, 795, 1962); this discrepancy is ascribed to variation of the electron temperature during decay of the plasma correction for electron temperature variations; calculated from the wall temperature variation of the recombination radiation intensity brought the observed recombination rates into good agreement with the predictions of the three-body collision theory. The ambipolar diffusion constant extrapolated to an electron temperature of 300°K was found to be $300/p \text{ cm}^2 \text{ sec}$. This value is some 30% lower than those found by M.J.Mulcahy and J.J.Lennon (Proc.Phys.Soc. (London), 80, 626, 1962) and H.J.Oskam and V.R.Mittelstadt (Phys.Rev., 132, 1435, 1963), but the discrepancy is not considered serious in view of the nature of all three experiments. The authors

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L 10668-66

ACC NR: AP5028317

thank Y.Ye.Golant for his interest in the work, S.I.Nanobashvili for participating in the preparation of the experiments, and Yu.N.Kuz'min for discussing the results. Orig. art. has: 10 formulas and 7 figures. 41.25 9 44.55

SUB CODE: 20

SUBM DATE: 12Feb65/

ORIG.REF: 005

OTH REF: 007

Cord 3/8

L 10669-66 EWT(1)/EWA(m)-2 IJP(c) AT

ACC NR: AP5028319

SOURCE CODE: UR/0057/65/035/011/2042/2051

AUTHOR: ^{44,55} Anisimov, A.I.; ^{44,55} Budnikov, V. N.; ^{44,55} Vinogradov, N.I.; ^{44,55} Golant, V.Ye. 87

ORG: ^{44,55} Physico-technical Institute im. A.F.Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskii institut AN SSSR) B

TITLE: ^{21,44,55} Use of open cylindrical resonators in plasma research

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 11, 1965, 2042-2051

TOPIC TAGS: plasma diagnostics, electron density, microwave, resonator, resonator Q factor, resonance frequency, helium plasma, *plasma research* 21,44,55

ABSTRACT: Advantages are pointed out of the use of open-ended circular cylindrical resonators rather than closed resonators for measuring electron concentrations in plasmas by the resonance frequency shift method; formulas are presented (most of these are taken directly from the literature) for calculating resonance frequencies, field distributions, and Q-factors of open resonators; and experiments are described which prove the feasibility of using open resonators in plasma diagnostics. There are two basic advantages of the open resonator; the open ends facilitate introduction of the plasma into the resonator, particularly if the plasma is confined in a cylindrical tube; and the resonant frequencies are widely separated, so that the higher modes are relatively easily identified. These features of the open resonator afford the following possibilities; the diameter of the resonator can be made only slightly larger than that of the tube containing the plasma, thus enabling the plasma

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L 10669-66

ACC NR: AP5028319

to fill a large fraction of the resonator volume; a wide range of frequencies can be employed (by using the higher resonant modes), so that a wide range of electron concentrations can be measured; several different modes at widely differing frequencies can be simultaneously excited and their frequency shifts measured; information concerning the radial distribution of electron concentration can be obtained by measuring the frequency shifts of different modes having different radial distributions of the longitudinal electric field component; and an open resonator can be mounted within the plasma container itself. One can also excite the resonator at a frequency above the cutoff frequency at some point near the axis of the plasma column and determine the cutoff radius with the aid of the theory of a coaxial resonator. A 2.3 cm diameter 20 cm long open copper resonator excited in the 3 cm and 8 mm wavelength regions was employed to measure electron concentrations between 3×10^9 and 10^{11} cm^{-3} in helium plasmas excited in a 1.6 cm diameter 50 cm long quartz tube containing helium at 0.2 mm Hg by 20 μ sec discharges. Control measurements were made in the 10 cm wavelength region with a 9.1 cm diameter 3 cm long closed resonator having 2.6 cm diameter openings in the end walls to admit the plasma tube. The effect of the quartz tube on the Q-factor was found to be negligible, and its effect on the resonant frequency shift was determined experimentally. Measurements were made using the E_{011} , E_{012} and E_{221} modes of the open resonator and the E_{010} mode of the closed resonator, and the different measurements were found to be in good agreement with each other. The logarithm of the electron concentration decreased linearly with time, and the scatter of the 25 experimental points from the straight line did not exceed

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ACC NR: AP5028319

10%. It is concluded that an open cylindrical resonator can be employed to measure electron concentrations in plasmas. Orig. art. has: 16 formulas, 3 figures and 3 tables.

SUB CODE: 20

SUBM DATE: 15Mar65/

ORIG. REF: 013 OTH REF: 001

Card 3/8

AMERSON, A. M.

"The Role Played by the Environment, Conditions of Feeding, and Special Measures in Increasing the Resistance of Cabbage to Bacteria." Cond Agri Sci, Khar'kov Agricultural Inst, Khar'kov, 1953. (RZhBiol, No 1, Sep 54)

SO: Sw. 432, 29 Mar 55

USSR/Plant Diseases. Diseases of Cultivated Plants.

2-2

Abs Jour: Ref Zhur-Biol., No 6, 1958, 25345.

Author : ~~Anisimov, A.N.~~

Inst : Kharkov Agricultural Institute.

Title : Internal Infection With Bacteriosis of the Pericarps of
Cabbage. Preliminary Report.
(O vnutrenney infektsii pri bakteriozakh semennikov
kapusty. Predvaritel'noye soobshcheniye).

Orig Pub: Zap. Khar'kovsk. s.-kh. in-ta, 1957, 13, (50), 123-125.

Abstract: An analysis of 150 heads of cabbage appearing healthy
on the outside made in the fall of 1951 revealed that
18 heads had symptoms of typical vascular and mucil-
laginous bacterioses. The cause of vascular bacteriosis
Xanthomonas campestris (Pammel) Dawson was isolated
from the spots where the leaf veins were blackened; from

Card : 1/2

USSR/Plant Diseases. Diseases of Cultivated Plants.

0-2

Abs Jour: Ref Zhur-Biol., No 6, 1958, 25345.

the heads infected by mucilaginous bacteriosis one found *Erwinia carotovora* (Jones) Holland and *Erwinia aroidae* Townsend. In view of the fact that internal infection of the heads makes the selection of healthy samples difficult which are intended to be stored, the author considers it more expedient to store the cabbage stumps rather than just the heads.

Card : 2/2

7

COUNTRY : USSR
CATEGORY : Plant Diseases. Diseases of Cultivated Plants.
ABS. JOUR. : RZBiol., No. 12, 1958, No. 54019

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : variety appeared relatively small. Micro-nutrients, placed with NPK, generally produced a beneficial effect on increased bacterial resistance in cabbage. However, the findings vary, in all probability, in relation to soil and meteorological conditions. Basing his conclusion on the fact that the application of NPK and the microelements increase the amount of dry matter in the cell sap of the cabbage plants and stimulates

CARD: 2/3

ANISIMOV, A.M., assistant.

Eliminate shortcomings in construction work on livestock farms.
Zhivotnovodstvo 20 no.1:82-83 Ja '58. (MIRA 11:1)

1. Gor'kovskiy sel'khozinstitut.
(Farm buildings)

ANISIMOV, Aleksandr Mikhaylovich

ZADOV, Aleksandr Grigor'yevich; ANISIMOV, Aleksandr Mikhaylovich; BAZLOV, Mikhail Nikolayevich; BRAGIN, Viktor Alekseyevich; GUDKOV, Boris Aleksandrovich, KOROTKOV, Sergey Tikhonovich, SHTEYNER, Samuil Iovlevich; SHHREMET'YEVA, L.P., vedushchiy red.; TROFIMOV, A.V., tekhn.red.

[Petroleum industry in Krasnodar Territory] "Neftianaya promyshlennost' Krasnodarskogo kraia. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1957. 69 p. (MIRA 11:2)
(Krasnodar Territory--Petroleum industry)

Anisimov, A. M.

137-1958-1-113

Translation from: Referativnyy zhurnal, Metallurgiya. 1958 Nr 1, p 18 (USSR)

AUTHOR: Anisimov, A. M.

TITLE: Hydraulic Working of Placers With Free-Flowing Non-pressurized Water (Gidravliche-kaya razrabotka rossyey beznapornym potekom vody)

PERIODICAL: Kolyma. 1957, Nr 4, pp 18-20

ABSTRACT: A method of working placers by washing is examined. The essence of the method lies in the fact that water accumulated in a special reservoir is released to the work area at intervals at a flow rate of 5-20 m³/sec. The output attainable by this wash method depends upon the slope of the area, the nature and composition of the alluvial deposits forming the placer and the flow rate of the source of water. However, it comprises ≤ 30 m³ per worker per shift. The advantage of this method is that it does not require any costly machinery, electric power, or large capital investments in the erection of equipment. The cost of the structures built for the use of this method is amortized in a single season.

Card 1/1

A Sh.

1. Mines--Operation 2. Mining engineering 3. Mines--Equipment

ANISIMOV, A.M.; KARAYEV, A.K.; SIDOROV, N.A.

Drilling wells in gas condensate fields of the Kuban. Neft. khoz.
39 no.11:6-10 N '61. (MIRA 14:12)
(Kuran--Oil well drilling)

ANISIMOV, A.M.

Axisymmetric vibrations of a spherical fluid-filled shell. Izv.
vys. ucheb. zav.; av. tekhn. 6 no.2:29-33 '63. (MIRA 16:8)

(Elastic plates and shells--Vibration)

ANISIMOV, A.N.

(1)

Hygienic evaluation of some methods of decontamination of waters from the shale industry. A. N. Anisimov. *Gigiena i Sanit.* 1953, No. 8, 12-10. — The waste liquors from shale pyrolysis contain phenols, AcOH , Me_2CO , NH_4OH , and other substances. Passage of these through coke-ash pits removes some 85-88% of the phenol content. An alternate method is passage of the liquor to the gas generators, from which it is then removed with the ash to the ash piles. The latter method is applicable for liquors contg. under 2 g./l. phenols. G. M. Kosolapoff

ANISIMOV, A.N.

LAZAREV, N.V.; ALEKSANDROV, I.S.; LYUBLINA, Ye.I.; AKKERBERG, I.I.; ZAKA-
BUNINA, M.S.; GADASKINA, I.D.; DOBRYAKOVA, N.S.; KREPS, I.F.; KARASIK,
V.M.; LEVINA, E.N.; DANISHEVSKIY, S.L.; YEGOROV, N.M.; RYLOVA, M.L.,
starshiy nauchnyy sotrudnik; KARPOV, B.D.; ANDREYEV, V.V.; LYKHINA,
Ye.T.; ZAMESHAYEVA, G.I.; ANISIMOV, A.N.; FRIDLYAND, I.G.; DANETSKAYA,
O.L.; BOGOVSKIY, P.A.; TIUNOV, L.A.; MIKHEL'SON, M.Ya.; ABRAMOVA, Zh.I.,
GRIGOR'YEVA, L.M.; KLINSKAYA, K.S.

Third Leningrad conference on the problems of industrial toxicology.

Farm.1 toks. 16 no.2:59-62 Mr-Apr '53.

(MLRA 6:6)

(Poisons)

USSR/Pharmacology. Toxicology.

V

Abs Jour: Ref. Zhur. - Biol., No 22, 1958, 103019

Author : Anisimov, A. N.

Inst : -

Title : On the Problem of Toxicity of Naphthenic Acid.

Orig Pub: Zdravokhr. Sov. Estonii. Sb. 3, Tallin, Est.
gos. izd-vo, 1955, 225-237

Abstract: The toxic action of naphthenic acids (I) in subcutaneous introduction of 0.5-2 ml and inhalation in a concentration of 300 mg/m³ in 4-hour-long exposure daily in the course of 20 days was studied in experiments on rats and guinea pigs. It was determined that I possesses toxic action inducing a drop of weight of 15% in the animals, inflammation of bronchi and lungs, degenerative

Card 1/2

44

ANISIMOV, A.P., inzhener; KASSATSIER, M.S., inzhener, redaktor; VASIL'YEV,
A.A., retsenzent laureat Stalinskoy premii inzhener; UVAROVA, A.F.,
tekhnicheskiiy redaktor

[One-bucket excavators] Odnokovshovye ekskavatory. Moskva, Gos.
nauchno-tekhn. izd-vo mashinostroitel'noi lit-ry, 1955. 194 p.
(Excavating machinery) (MIRA 9:2)

PROKOF'YEV, Ivan Iosifovich. prof.: ~~ANISIMOV~~. Aleksey Petrovich,
kand. tekhn. nau' BRONSHTEYN, L.A., prof., retsenzent;
LIV'YANT, Ya.A., red.

[Economics of automotive transportation] Ekonomika avto-
mobil'nogo transporta. Moskva, Transport, 1965. 311 p.
(MIRA 18:7)

ANISIMOV, A.P.

KACHAN, I.K.; MARCHENKO, D.A.; ROZENBERG, D.A.; ANISIMOV, A.P.; BERESTETSKIY
M.M.

Use of poles made from centrifuged reinforced concrete in building electric
transmission and communication lines. Energ.biul. no.6:6-13 Je '53.

(MLPA 6:6)

(Electric lines--Poles)

ANISIMOV, A. P.

Subject : USSR/Electricity AID P - 787

Card 1/1 Pub. 28 - 2/5

Authors : Kachan, I. K., Marchenko, D. A., Anisimov, A. P.,
Shishkin, O. P. and Guterman, D. I.

Title : Experience in use of a movable electric substation for
electric power supply in oil fields

Periodical : Energ. byul. #2, 9-15, F 1954

Abstract : Brief description of electric substations, movable by
railroad or motor transport to a center of oil prospecting.
The substations have lower costs of construction and
operation than the stationary units. 4 photographs,
1 table and 2 Russian references in the text (1953).

Institution : Inter-Departmental Experimental and Technical Council of
the State Inspection of Electric Power and Power
Inspection (MES 1 EP)

Submitted : No date

ANISIMOV, A.P.

KACHAN, I.K.; MARCHENKO, D.A.; ROZENBERG, D.A.; ANISIMOV, A.P.;
BERESTETSKIY, M.M.

Experience in planning and building high-voltage electric trans-
mission lines on supports made from centrifugal reinforced concrete.
Energ.biul. no.3:19-25 Mr '54. (MLRA 7:3)

1. Trest Energomontazhneft'. (Electric lines--Poles)

2075 107011 207

AID P - 519

Subject : USSR/Engineering

Card 1/1 Pub. 93 - 6/12

Authors : Kachan, I. K., Marchenko, D. A., Rosenberg, D. A.,
Anisimov, A. P., Berestetskiy, M. M., Engineers

Title : Supports for electrical transmission lines made from
centrifugal reinforced concrete (Tested by the Trust
Energomontazhneft')

Periodical : Sbor. mat. o nov. tekhn. v stroi., 6, 15-20, 1954

Abstract : The Tbilisi Scientific Research Institute of Construc-
tion and Water Power Engineering (TNISGEI) with the
assistance of Prof. Mikhaylov, V. V. and Mikhel'son,
Ye. E. has designed a new type of support for
6-10-35 kv transmission lines. The supports are assembled
from prefabricated tube-shaped members made of reinforced
concrete, which is poured into forms by a centrifugal
method. 3 photos, 3 tables.

Institution : None

Submitted : No date

ANISIMOV, A. P.

USSR/Electricity - Suspension line supports

Card 1/1 : Pub. 133 - 3/20

Authors : Kachan, I. K.; Marchenko, Ts. A.; and Anisimov, A. P.

Title : The application of centrifuged reinforced-concrete supports for overhead communication lines

Periodical : Vest. svyazi 10, 5-6, Oct 54

Abstract : An account is given of the production methods and structure of centrifuged reinforced-concrete supports for overhead communication lines. A description of the above mentioned supports is presented, together with tables giving technical specifications. Drawings.

Institution : ...

Submitted : ...

ANISIMOV, A. P.

AID P - 1292

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 16/30

Authors : Kachan, I. K., Eng. and Anisimov, A. P., Eng.

Title : Constructing transmission lines with supporting structures built from prefabricated centrifuged reinforced-concrete parts

Periodical : Elektrichestvo, 1, 69-72, Ja 1955

Abstract : The Tbilisi Scientific Research Institute of Construction and Hydraulic Engineering of the Ministry of Electric Power Stations for several years has studied the problem of utilizing reinforced concrete towers for transmission lines. The first such experimental 6 and 10-kv lines were built in the USSR in 1948. The first factory producing such prefabricated structures for communication and power lines up to 35 kv was built in Groznyy. The authors describe the details of fabrica-

ANISIMOV, A. P.

AID P - 1921

Subject : USSR/Electricity

Card 1/1 Pub. 29 - 1/31

Authors : Kachan, I. K., Anisimov, A. P., Marchenko, D. A.,
and Levit, Ye. S., Engineers

Title : Use of reinforced concrete supporting structures in
building 35-kv transmission lines

Periodical : Energetik, 3, 1-4, Mr 1955

Abstract : The authors give an account of the experience obtained
by the technical personnel of the Trust
"ENERGOMONTAZHNEFT" in producing concrete poles and
in building transmission lines with them. They give
technical details of production and construction.
Two photographs, 1 drawing, and 2 tables.

Institution: "ENERGOMONTAZHNEFT"

Submitted : No date

ANISIMOV, A.P.

"Electric power supply and electric equipment for petroleum plants"
Reviewed by A.P. Anisimov. Prom. energ. 15 no.10:54-55 0 '60.

(MIRA 13:11)

(Petroleum industry--Electric equipment)

ANISIMOV, Aleksey Petrovich, inzh.; SOKOLOV, D.V., inzh., nauchnyy
red.; GORDEYEV, P.A., red. izd-va; NAUMOVA, G.D., tekhn.
red.

[Electric equipment and power supply at building sites]
Elektrooborudovanie i elektroснабzhenie stroitel'nykh plo-
shchadok. Moskva, Gosstroizdat, 1962. 226 p.

(MIRA 15:9)

(Building--Electric equipment)

L 12474-65 ENT(d)/REC(k)-2/SED-2/PWP(1) Po-4/Po-4/Pg-4/Pk-4 LJP(c)/BSU/
ASU(s)-5/AFTG(s)/ASD(s)/ESD(op)-38/GC
ACCESSION NR: AP4047473 S/0120/64/000/005/0126/0128

AUTHOR: Barilko, Sh. I.; Anisimov, A. P.; Vankov, I. D.; Kim Gen' Chum

TITLE: Address driver for ferrite-type storage

SOURCE: Priborny i tekhnika skopaniya, no. 5, 1964, 126-129

TOPIC/ABCS: storage, computer storage, address driver, ferrite type storage,
AI-256 address driver

ABSTRACT: A transistorized address driver is described in which diode-gate trans-
formers are used only for switching the sources of readout and recording currents
are connected directly to the address trunks, and no preliminary address decoder
is used. The switching of bipolar current pulses passing through loads Z_1 and Z_2
(address trunk of the storage cube) is effected by a diode transformer gate shown
in Fig. 1 of the Enclosure. A laboratory model of the driver for 256 numbers was
in tentative operation for over a year and demonstrated its high reliability.
The number of components in the driver is:

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L 12074-65

ACCESSION NR: AP4047473

transformers

diodes

transistors

In experimental model

24

96

16

In earlier AI-256 driver

32

128

64

The new driver has one disadvantage in that no sequence of readout (or recording) cycles is parallelizable; in other words, each readout cycle must be followed by a recording cycle. Orig. art. has 6 figures and 3 tables.

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy (Joint Nuclear Research Institute)

SUBMITTED: 14 Nov 64

ENCL: 01

SUB CODE: DP

NO REF SOV: 002

OTHER: 000

ATD PRESS: 3126

Card 2/3

L 12474-65

ACCESSION NR: AP4047473

ENCLOSURE 01

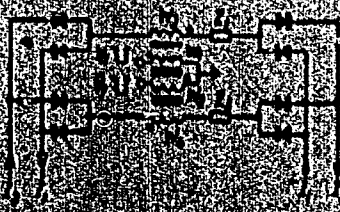


FIG. 1. Diode-transformer gate

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L 7045-65 EWT(m)/EMP(1) 70-4 ASD(M) L5 RM
 ACCESSION NR: AP4043484 S/0135/64/000/008/0023/0024

AUTHOR: Anisimova, A. P. (Engineer); Zaksen, R. I. (Candidate of technical sciences)

TITLE: Oscillating-motion friction welding of plastics ¹⁵

SOURCE: Svarochnoye proizvodstvo, no. 8, 1964, 23-24 ^{3B}

TOPIC TAGS: friction welding, plastics welding, welding, heat sealing

ABSTRACT: A study has demonstrated the feasibility of vibration friction welding of thermoplastics of virtually any thickness. As indicated in Fig. 1 of the Enclosure, parts 1 and 2 are pressed together by load (p), are rubbed with oscillating motion with amplitude (A) and frequency (v), and are thereby heated to a certain depth. The friction welding equipment is described and the experimental conditions are tabulated in the original article. The governing parameters of the process are v, A, and p (at the velocity used, 9 m/min, p is a function of the physical properties of the plastics, particularly of density). The following empirical relation held true, all other con-

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L-7045-65

ACCESSION NR: AP4043484

ditions remaining the same:

$$p = a + k(\gamma - 1);$$

where p is the pressure in kg/mm^2 , a and k are constants, and γ is the density of the plastic in g/cm^3 at $\gamma \leq 1 - p = 0.2 \text{ kg/mm}^2$. The time of welding is independent of the cross section of the part. An increase in the area of contact and thickness of the parts increases the power requirement. The following plastics were welded: low- and high-pressure polyethylene; polystyrene; capron; poly(methyl methacrylate); poly(vinyl chloride); and polyoxymethylene. Orig. art. has: 4 figures, 1 table, and 1 formula.

ASSOCIATION: NIITRAKTOROSSEL'F40ZNASH

SUBMITTED: 00

ATD PRESS: 3104

ENGL: 01

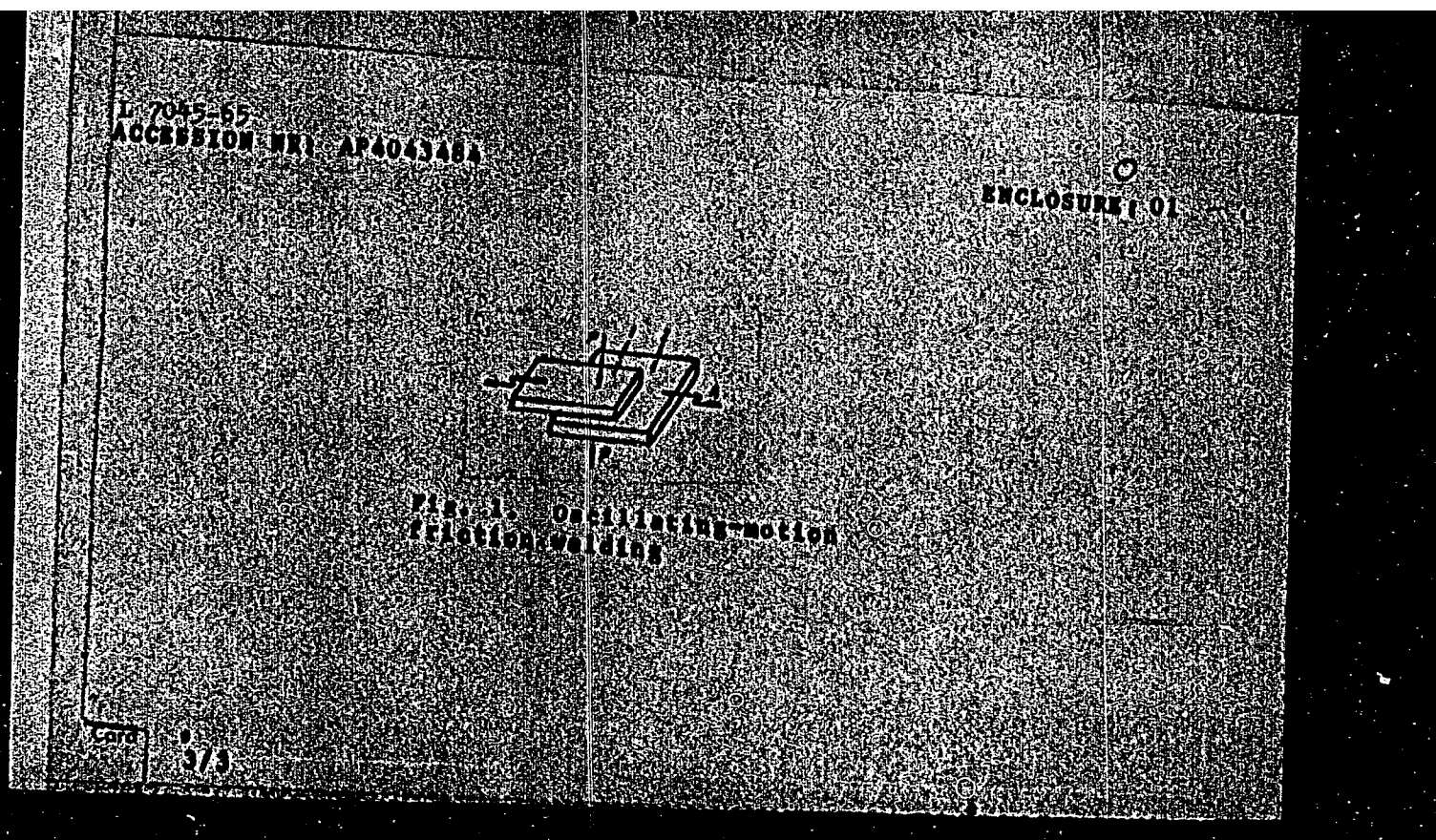
SUB CODE: MT, 12

NO REF SOV: 000

OTHER: 000

Card

2/3



BARILKO, Sh.I.; ANISIMOV, A.P.; VANKOV, I.D.; KIMGEN'CHUN

Address actuator of a memory device operating on ferrites.
Prib. i tekhn. ekap. 9 no.5:126-129 S-O '64.

(MIRA 17.12)

1. Ob'yedinennyy institut yadernykh issledovaniy.

POPOV, I.I., dotsent; YESHUTKIN, N.V., dotsent; ALLOSHIN, V.I., dotsent.

Physicomechanical and elastic properties of Gal'shad deposit
rocks and ore. Izv.vys.ucheb.zav.; gor.zhur. 7 no.12:16-20 '67.
(MIRA 18:2)

1. Karagandinskiy politekhnicheskiy Institut. Rekomendovana
kafedroy teodezii i marksheyderskogo dela.

ANISIMOV, A.P.

Operation of mobile 35/6 kv. substations in oil fields. Prom.energ.
19 no.7:56-57 J1 '64. (MIRA 18:1)

1. Giprogrozneft'.

L 33993-66 EWT(d)/EWP(1) IJP(c) BB/QG

SOURCE CODE: UR/0058/65/000/012/A032/A033

ACC NR: AR6017198

AUTHOR: Anisimov, A. P.; Barilko, Sh. I.; Vankov, I. D.

TITLE: High-speed arithmetic unit for multichannel analyzer

SOURCE: Ref. zh. Fizika, Abs. 12A315

REF SOURCE: Tr. 6-y Nauchno-tekhn. konferentsii po yadern. radioelektron. T. 2. M., Atomizdat, 1965, 58-67

TOPIC TAGS: multichannel analyzer, arithmetic unit, algebraic logic, computer memory, computer program

ABSTRACT: The authors describe the functions performed by an arithmetic unit (AU) of a multichannel analyzer in terms of algebraic logic, and present two AU circuits without flip-flops, with a counting input. The AU is one of the main units of all analyzers with magnetic operative memories (MOM). In analyzers with MOM, the AU carries out the following functions: 1) addition of unity to the number recorded in the memory; 2) discarding the information recorded in the memory; 3) transfer of the number to the output units (oscillograph, printer, or neon indicators). When a detector pulse is received by the analyzer, the standard program of its registration is carried out, consisting of the following: 1) clearing the AU of earlier information; 2) reading the number from the corresponding memory channel and transferring this number in parallel code to the AU, where it should be remembered for a certain time; 3) addition of unity to the number read from the memory; 4) recording the newly obtained

Card 1/2

7-00000-00 EVD(+)/MPP(+)-ETI/1.0 [P] (1/1) 1.000

ACC NR: AP6010131

SOURCE CODE: UR/0122/66/000/003/0061/0062

AUTHOR: Anisimov, A.P. (Engineer)

ORG: None

TITLE: The problems of local processes during dimensional etching

SOURCE: Vestnik mashinostroyeniya, no. 3, 1966, 61-62

TOPIC TAGS: metal etching, metal finishing

ABSTRACT: Recently, chemical milling of metals and alloys has gained wide acceptance. However, during the etching of parts of complex shape it is often quite difficult to achieve a uniform removal of the metal. The present note is the result of experimental studies on samples made of aluminum D16 alloy etched by NaOH at 80°C. The author offers explanations for the possible mechanism. An analysis of the data shows that the uniformity of metal removal depends on the uniformity of temperature on the etched surfaces (a function of the heat-removal properties), on the positioning of the part within the tank (a horizontal orientation of the experimental unit gave the best results), on local surface features making the access of the etching solution difficult, and on the characteristic of

Card 1/2

UDC: 621.9.047.4